SAGEM F@st™ 1200/1240

User Guide

252 569 421-01

February 2006 edition

SAGEM

Warning

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Symbol conventions used in this manual

Gives you important information that you should take into account.

Warns you against an action or a serious omission.

E 2002/96/CE DIRECTIVE

ENVIRONMENT

Preservation of the environment as part of a sustainable development logic is an essential concern of **Sagem Communication**.
Sagem Communication's aim is to operate systems safeguarding the environment and consequently it has decided to integrate environmental performance considerations in the life cycle of its products, from manufacturing to commissioning, use and disposal.

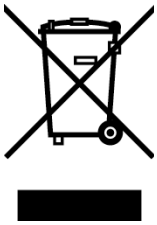
PACKAGING

The presence of the logo (green dot) means that a contribution is paid to an approved national organization to improve packaging recovery and recycling infrastructures.

To facilitate recycling, please respect the sorting rules set up locally for this kind of waste.

BATTERIES

If your product contains batteries, they must be disposed of at appropriate collection points.



THE PRODUCT

The crossed-out waste bin marked on the product or its accessories means that the product belongs to the family of electrical and electronic equipment.

In this respect, the European regulations require you to dispose of it selectively:

- At sales points on purchasing similar equipment,
- At the collection points made available to you locally (drop-off center, selective collection, etc.).

In this way, you can participate in the re-use and upgrading of **E**lectrical **E**lectronic **E**quipment **W**aste, which can have an effect on the environment and health.

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1. Introduction

This chapter covers	➢ an overview of the SAGEM F@st™ 1200/1240	§ 1.1
	➢ the composition of the supply	§ 1.2
	➢ the IT requirements	§ 1.3

1.1 Introduction

The SAGEM F@st™ 1200/1240 is an IP modem/router with high speed ADSL interface enabling different users to share an ADSL connection in SOHO (Small Office, Home Office) residential usage mode.

This modem/router provides Internet access for computers equipped with a USB port and/or an Ethernet port.

SAGEM F@st™ 1200 and SAGEM F@st™ 1240 equipments respectively adapt the ADSL function on POTS (ITU-T G.992.1/3/5 - Appendix A) and on ISDN (ITU-T G.992.1/3/5 - Appendix B).

Main features and functions:

- High performance, secured bridge/router with ADSL interface,
- ADSL / ADSL2 / ADSL2+ interface,
- Ethernet 10/100 BASE-T, USB1.1 slave user access,
- WAN protocols: PPP over ATM (PPPoA), PPPoE, IPoA, Bridge over ATM,
- IP services: DNS relay, DHCP server, NAT/PAT address translator, IP filtering,
- Configuration by Java application supported by the client,
- Support of ATM service grades (CBR, VBRt, VBR, UBR),
- Management of four ATM VCCs,
- Statistics and error messages,
- Supervisory LEDs.

1.2 Composition of the SAGEM F@st™ 1200/1240 package

The SAGEM F@st™ 1200/1240 is supplied in a package containing:

- One SAGEM F@st™ 1200/1240 modem/router,
- One mains adapter,
- One RJ11/RJ11 FDT ADSL line lead (length = 3 m),
- One RJ45/RJ45 FDT Ethernet lead (length = 3 m),
- One Type A male / Type B male USB lead (length = 1.5 m),
- One Filter/Splitter (according to model),
- One installation CD-ROM,
- One quick startup guide.

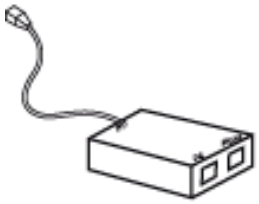
SAGEM F@st 1200/1240 Modem/Router

Mains adapter

RJ11/RJ11
ADSL line lead

RJ45/RJ45
Ethernet lead

Type A male/
Type B male
USB lead



Filter/Splitter
(according to model)

CD-ROM

Startup Guide

The CD-ROM contains:

- the software for installing the Ethernet (ETH) and USB interfaces.
- the SAGEM F@st™ 1200/1240 User Guide in pdf file format.
- the SAGEM F@st™ 1200/1240 CE declaration.

Incomplete or damaged supply. If, on receipt, the equipment is damaged or incomplete, contact your SAGEM F@st™ 1200/1240 supplier.

1.3 Prerequisites

To use the SAGEM F@st™ 1200/1240, you need the following:

- one or more service provider subscriptions.
- a computer with:
  - a TCP / IP protocol stack,
  - a type A USB interface.

    or
  - an Ethernet 10BASE-T or 10/100BASE-T interface,
- Operating systems supported:
  - Windows: 98 2nd Edition, ME, 2000 and XP
  - MAC OS X
  - Linux Redhat 9.1 and Fedora Core3, Mandrake 10.1, Suse 9.2

Minimum computer configuration:

- for Windows: Pentium II, 400 MHz, RAM: 128 Mb,
- for MacOS: Power PC G3, 233 MHz, RAM: 128 Mb,
- 30 Mb free on your hard disk,
- a monitor with minimum resolution: 1024 x 768.

Before installing the SAGEM F@st™ 1200/1240 modem/router, we would advise you to uninstall any other modem or router.

2. Description and Installation of your modem/router

This chapter covers	➢ a description of your SAGEM F@st™ 1200/1240	§ 2.1
	➢ installation of your SAGEM F@st™ 1200/1240	§ 2.2
	➢ installation instructions	§ 2.3

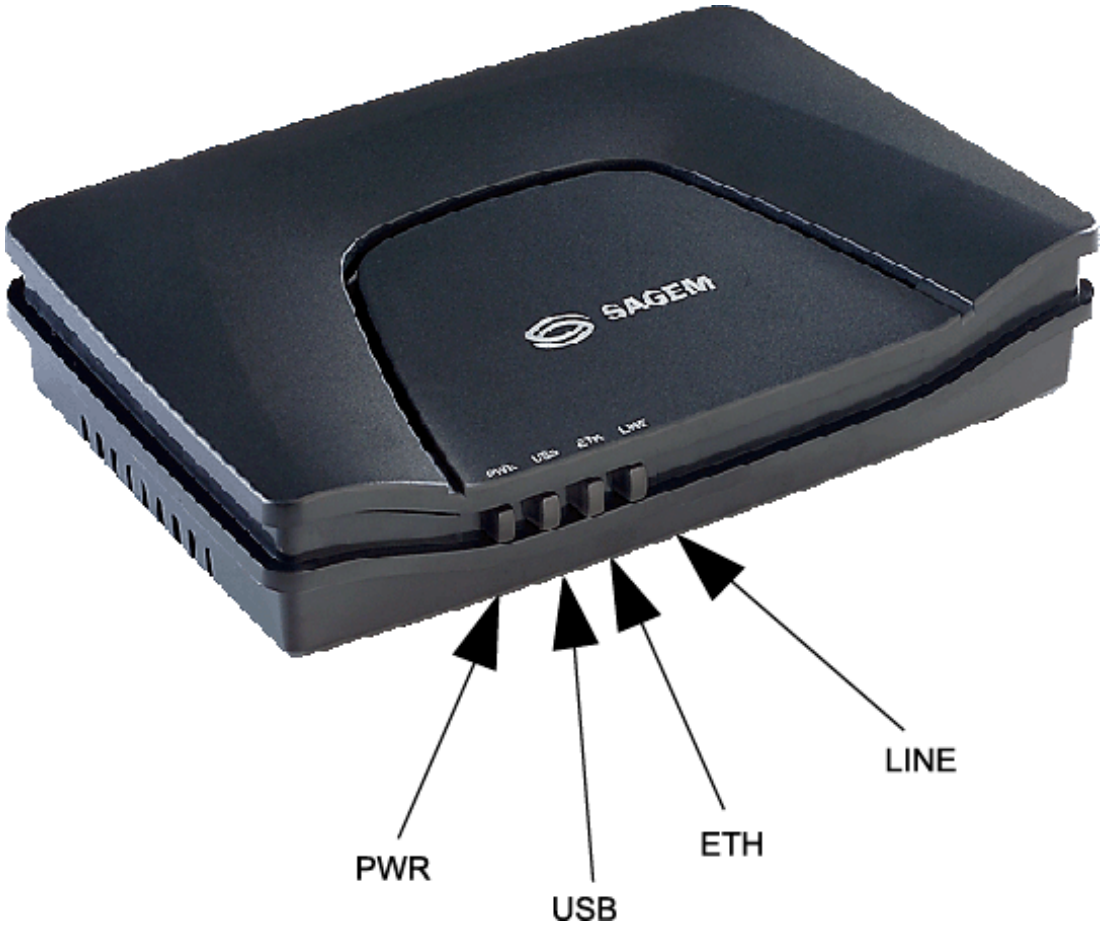
2.1 Description

The SAGEM F@st™ 1200/1240 modem/router takes the form of a box designed for use on a desktop or for wall mounting.

The unit has a front panel with four supervisory LEDs and a rear panel with connection ports, an on/off switch and a reset button.

Figure 2.1 - Overview of the unit

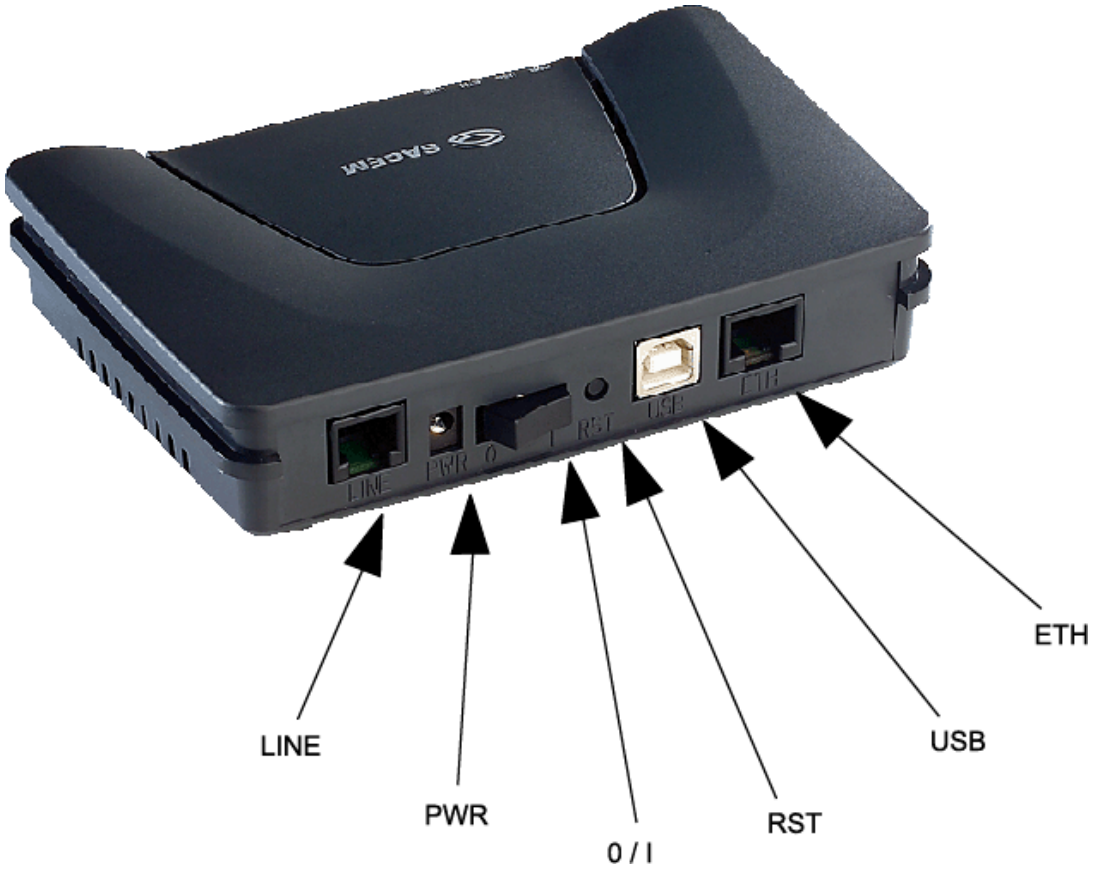
2.1.1 LEDs



The various LEDs in the figure above are described in the table below:

LED	Meaning
PWR	**Power supply presence** This LED is **lit** when power supply is present.
USB	**Activation / Activity on the USB link** This LED is **lit** when the USB interface is active. This LED is **off** when no traffic is detected.
ETH	**Ethernet link** This LED is **lit** when the ETH interface is active. This LED **blinks** in pace in with the traffic. This LED is **off** if no traffic is detected.
LINE	**ADSL line activation** This LED **blinks slowly** when the ADSL line is being synchronized, This LED is **lit** when the ADSL line is synchronized.

2.1.2 Ports



Marking	Meaning
LINE	6-way RJ11 socket for connection to an ADSL line (WAN interface).
PWR	This miniature coaxial jack socket is for powering the modem via the mains adapter unit.
O / I	On / Off switch.
RST	This button is recessed inside the unit to avoid accidental loss of configuration. It is used to restore the modem/router's factory-set configuration (see section A.5).
USB	Type B "Slave" USB female socket for connection to a computer (USB interface).
ETH	8-way RJ45 socket for connection either to a terminal or to a local area network (Ethernet 10/100 BASE-T LAN interface).

2.2 Installing the modem/router

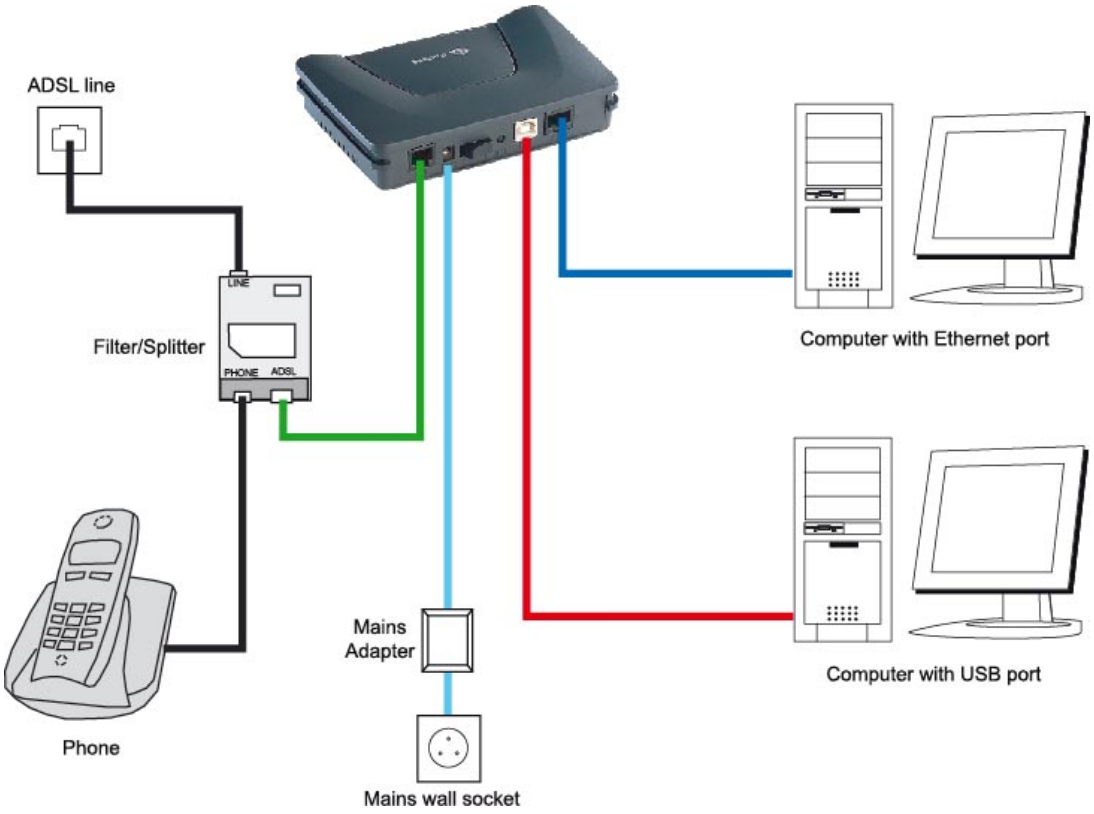


Figure 2.2 - Interconnecting the SAGEM F@st™ 1200/1240 ports

2.2.1 Powering up

- First connect the end of the mains adapter lead (adapter supplied with the equipment) to the **PWR** socket on your SAGEM F@st™ 1200/1240,
- Connect the adapter to a nearby mains outlet,
- Set the "**I/0**" switch to the "**I**" position,
- The **PWR** LED lights first followed by the other three LEDs, then the other three LEDs switch off in turn.

2.2.2 Connecting the ADSL lead to the SAGEM F@st™ 1200/1240

- Connect the other end of the lead to the port marked **ADSL** on the splitter connected to your home's standard French wall telephone outlet (T connector).

2.2.3 Connecting the SAGEM F@st™ 1200/1240 with the phone wall socket via Filter/Spitter

- Connect one end of the RJ11/RJ11 lead supplied to the **LINE** socket on your SAGEM F@st™ 1200/1240.
- Connect the other end of this lead to the port marked **ADSL** on the filter/splitter.
- Connect the **LINE** filter/splitter port to the phone wall socket.
- Connect the **PHONE** filter/splitter port to your telephone.

2.2.4 Connecting the SAGEM F@st™ 1200/1240 to a computer via the ETH lead

This connection is set up on installation with the dedicated CD-ROM.

2.2.5 Connecting the SAGEM F@st™ 1200/1240 to a computer via the USB lead

This connection is set up on installation with the dedicated CD-ROM.

2.3 Installation instructions

Environment

- The SAGEM F@st™ 1200/1240 must be installed and used inside a building.
- The room temperature must not exceed 45°C.
- The SAGEM F@st™ 1200/1240 should not be exposed to strong sunlight or to strong sources of heat.
- The SAGEM F@st™ 1200/1240 should not be placed in an environment subject to significant steam condensation.
- The SAGEM F@st™ 1200/1240 should not be exposed to splashed water.
- The SAGEM F@st™ 1200/1240 casing must not be covered.

Power source

- Use a readily accessible mains outlet, near to the equipment. The power supply lead is 2 m long.
- Arrange the power lead so as to avoid any accidental disconnection of the modem/router.
- The SAGEM F@st™ 1200/1240 is designed for connection to a TT or TN type power supply network.
- The SAGEM F@st™ 1200/1240 is not designed to be connected to an IT type electrical installation (power supply with independent neutral).
- Protection against short circuits and leaks between phase, neutral and earth should be provided by the electrical installation of the building. The power circuit to this equipment should be provided with 16 A overcurrent protection and differential protection.

Maintenance

- The unit must not be opened. This must be done only by personnel qualified and approved by your Supplier.
- Do not use liquid or aerosol cleaning agents.

3. Installing your modem/router

This chapter covers	➢ Installing and configuring your modem/router on your computer's network card (Ethernet).	§ 3.1
	➢ Installing and configuring your modem/router on your computer's USB port.	§ 3.2
	➢ Installing and configuring an additional computer.	§ 3.3

3 - Installing your modem/router

You can install and configure your modem/router with the following interfaces:

- Ethernet (see section 3.1),
- USB (see section 3.2),

Before installing your SAGEM F@st™ 1200/1240 modem/router, you must uninstall any other ADSL modem/router.

If you have installed your modem/router with an Ethernet interface and you want to install it with the other USB interface, **you must uninstall** the modem/router.

To do this:

Select **Start** / **All programs** / **SAGEM F@st™ 1200** / **Uninstall**.

3.1 Installing and configuring your modem/router on your computer's network card (Ethernet)

3.1.1 In Windows

The Ethernet socket marked **ETH** on your SAGEM F@st™ 1200/1240 is provided for you to connect your computers or wired Ethernet network elements. This port is a 10/100BASE-T port. It supports bit rates of 10 Mbit/s and 100 Mbit/s in Half or Full Duplex mode on a category 5 double twisted pair.

This port is an RJ45 connector with self-detecting MDI or MDI-x type wiring.

To this port, you can connect, using a straight or cross-pinned Ethernet lead (not supplied with the equipment):

- either directly to a computer equipped with an Ethernet 10/100BASE-T network card,
- or to an Ethernet local area network connected to a network concentrator (HUB or Switch).

The **installation** procedure described below was carried out in **Windows® XP**. Installation in other Windows® operating systems (98, ME and 2000) may present slight differences.

1 Insert the CD-ROM in your computer's appropriate drive; the screen opposite appears.

Carry out the operations described on screen.

Click the Next > button to continue installation.

Note: If this screen does not appear: In the **Start** menu, select **Run** then enter: "<CD-ROM drive letter> :**F@st1200.exe** then click **OK**.

2 The screen opposite appears.

Click

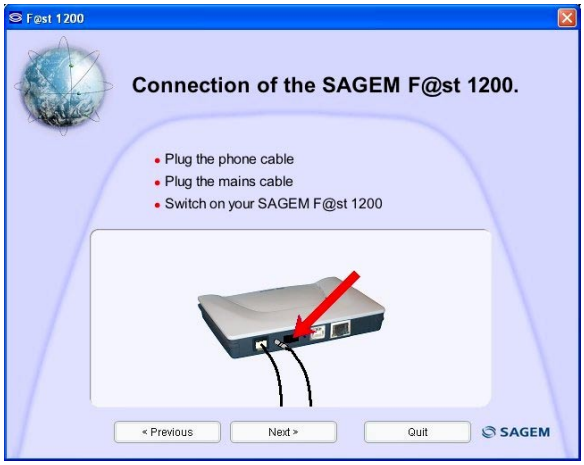
Complete installation
*I want to **connect** and **configure** my SAGEM F@st 1200.*

.

3 The screen opposite appears.

Carry out the operations described on screen.

Click the Next > button to continue installation.

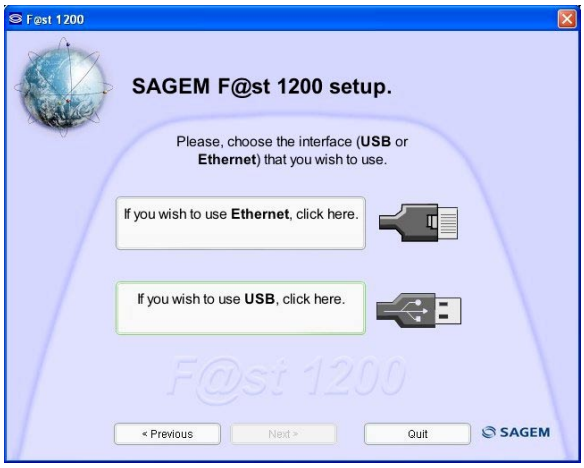


4 The screen opposite appears.

Click

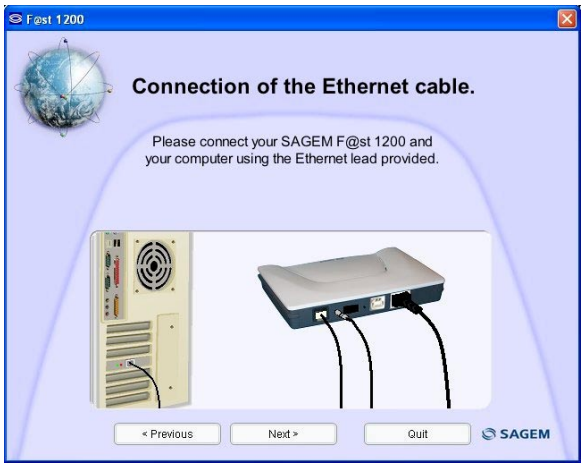
If you wish to use **Ethernet**, click here.

to install your modem/router on the **ETH** interface.



5 Connect the RJ45/RJ45 Ethernet lead by connecting the end of this lead to the **ETH** socket on your SAGEM F@st™ 1200/1240 then connecting the other end to an available Ethernet socket on your computer according to the animation displayed on screen.

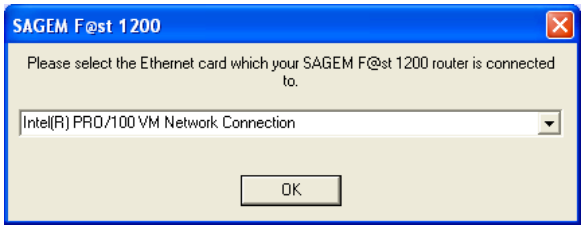
Click the Next > button to continue installation.



6 The screen opposite appears, if a number of Ethernet cards are installed on your computer.

Select the Ethernet card connected to the SAGEM F@st™ 1200/1240 from the drop-down list.

Then click OK to confirm your choice and continue with configuration.



7 The screen opposite appears and prompts you to wait.

8 The screen opposite appears.

Select your country of residence and your **I**nternet **S**ervice **P**rovider (ISP).

Click the Next > button to continue installation.

9 The screen opposite appears.

Enter the login identifier followed by the login password and confirm the latter.

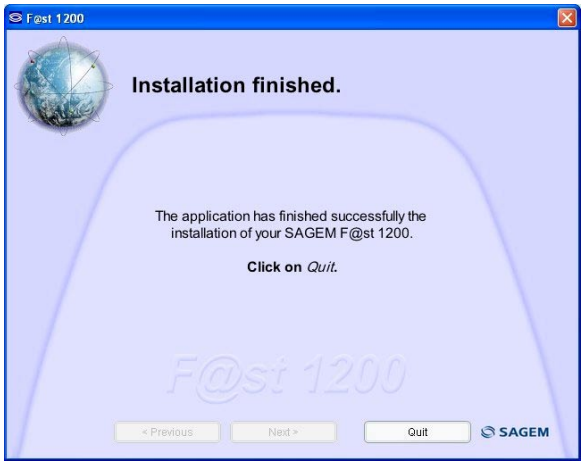
These will have been supplied to you by your ISP.

Click the Next > button to continue installation.

10 Installation is finished.

Two icons have been created respectively on your desktop and in the task bar (see detail below).

Click Quit .



☞ This icon created on your desktop lets you configure your modem/router (see chapter 5, Configuration).

☞ This icon created in the task bar lets you know the status of the modem/router (see Appendix A - Troubleshooting).

You can also use the **Start** menu to select **All programs** / **SAGEM F@st 1200** to access the following options:

You can now:

- **Surf the Internet**
- **Configure your modem/router more specifically.**

Caution: If on installation you entered an **incorrect** login identifier or password, you will have been able to continue and finish installation and have been allowed access to the configurator.

However, under no circumstances will you be able to surf the Internet.

To surf the Internet, you must enter the correct information, supplied to you by your Internet Service Provider. For this:

Open your configurator (see chapter 5), then select the "**WAN Setup**" tab.

3.1.2 In Mac OSX

The **configuration** procedure described below was performed in **Mac OS 10.4.1** (Tiger). It can be performed in other operating systems such as **Mac OS X 10.2 and 10.3**.

For the configuration application installed on your Macintosh to be able to communicate with your modem/router's embedded software, the IP addresses of your computer and of your SAGEM F@st™1200/1240 need to be in the same addressing plan. For this, you have two options:

- To activate your **modem/router's DHCP Server** and configure your **Macintosh** in **DHCP Client** mode. The DHCP server will then automatically supply your computer with an IP address (**default configuration of the SAGEM F@st™1200/1240, recommended for inexperienced users**).

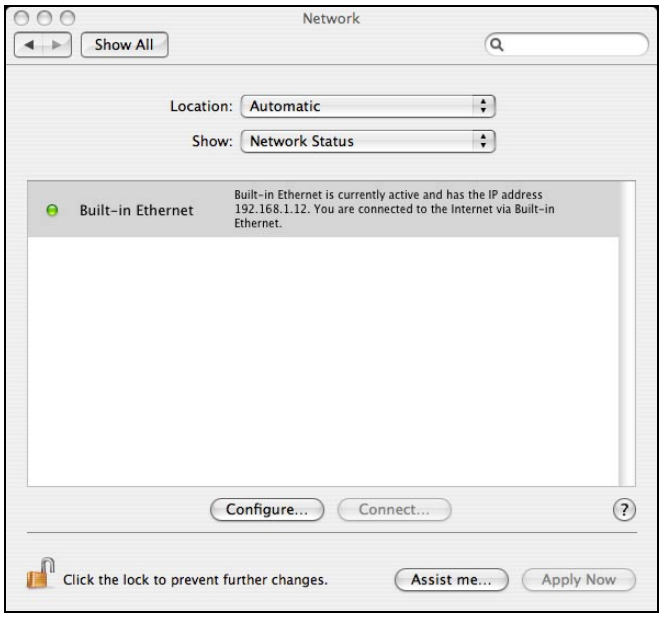
- To manually configure the IP addresses of your modem/router and your Macintosh, taking care to ensure that the IP addresses are in the same plan. The default IP address for your SAGEM F@st™1200/1240 is 192.168.1.1. You can therefore, for example, assign your computer the address 192.168.1.12.

If you incorrectly assign or lose the IP address of your modem/router, you should refer to Appendix A - Troubleshooting.

The paragraph below indicates the procedure for configuring the Macintosh in DHCP client mode, in order to obtain an IP address automatically from the modem/router.

1

Click the (apple) menu in the menu bar, select **" System Preferences "**, then click the **"Network"** icon.
The screen opposite appears.



In the shaded field "Built-in Ethernet":

- A green indicator lamp indicates activation (performed automatically on connecting the Ethernet lead from your SAGEM F@st™ 1200/1240).
- If your Macintosh is already configured in DHCP client mode and the DHCP server is running in your SAGEM F@st™ 1200/1240, the IP address assigned to your computer by the modem/router is specified.(example: 192.168.1.12).

Click the **"Configure"** button to modify or check your Macintosh's configuration.

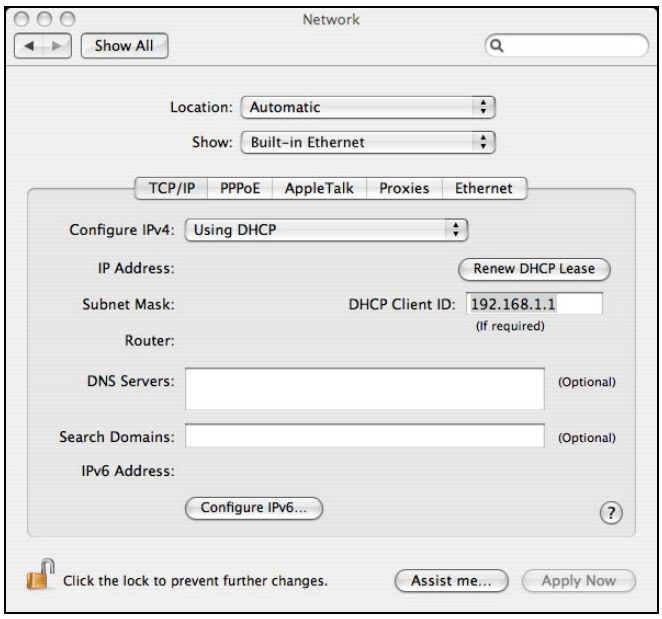
2 The **Show:** field should be set to **Built-in Internet** (by default)

The TCP/IP tab appears automatically.

The **Configure Ipv4:** field should contain **Using DHCP** by default. If not, select this setting from the drop-down list.

Note: If the **Using PPP** setting is displayed, select the **PPPoE** tab then uncheck the **Connect using PPPoE** box.

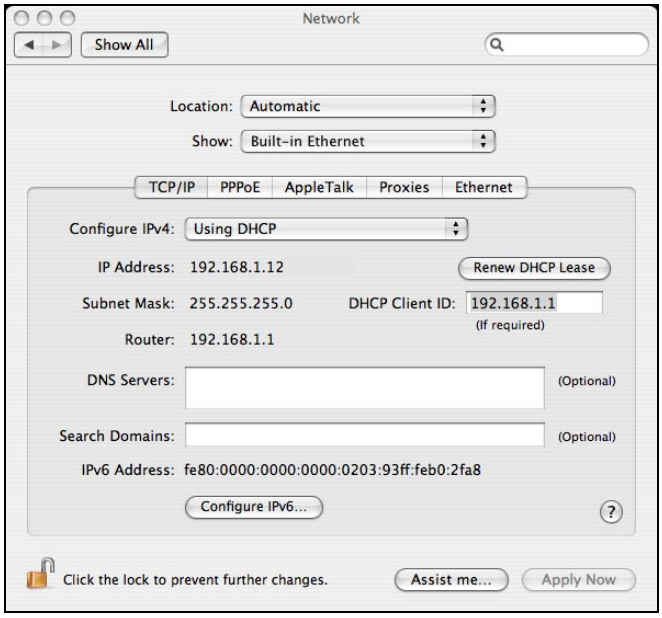
Click **Apply Now** to confirm connection in DHCP mode.



3 The network window is updated as shown opposite.

This panel should show the IP address, the subnet mask supplied by the modem/router and the default IP address of the SAGEM F@st™ 1200/1240's LAN interface (**192.168.1.1**).

You can now close the network window.



The **DHCP client, DNS servers** and **Search domains** fields are optional.

3.2 Installing and configuring your modem/router on your computer's USB port

3.2.1 In Windows

The **USB** port of the SAGEM F@st™ 1200/1240 is a USB 1.1 port supporting a maximum bit rate of 12 Mbit/s. The connector is type B.

On this port, you can connect directly to a computer with a type A USB port using a USB lead (supplied with the equipment).

Do not connect the USB lead until prompted by the installation procedure (that is, after installing the drivers).

The **installation** procedure described below was performed in **Windows® XP**. Installation in other Windows® operating systems (98, ME and 2000) may present slight differences.

1 Insert the CD-ROM in your computer's appropriate drive; the screen opposite appears.

Carry out the operations described on screen.

Click the Next > button to continue installation.

Note: If this screen does not appear: Select **Start**, then **Run**, then enter: "<CD-ROM drive letter> :**F@st1200.exe** then click **OK**.

 Sagem Communication document. Reproduction and disclosure prohibited

2 The screen opposite appears.

Click

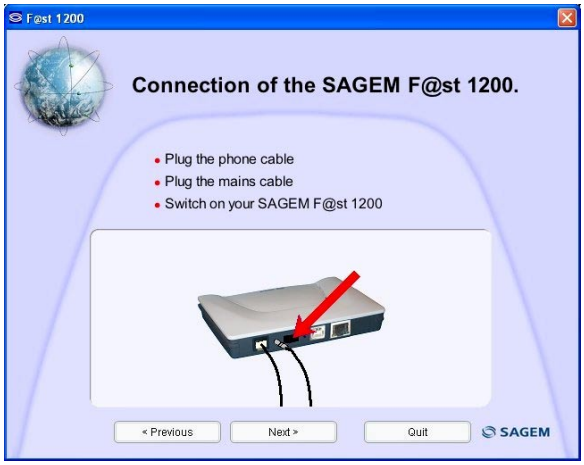
Complete installation
*I want to **connect** and **configure** my SAGEM F@st 1200.*

.

3 The screen opposite appears.

Carry out the operations described on screen.

Click the Next > button to continue installation.

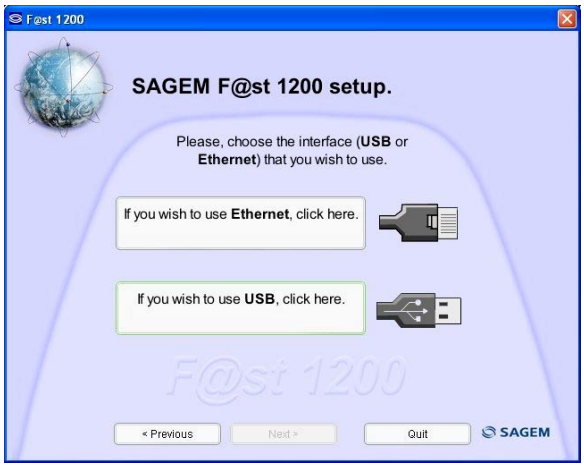


4 The screen opposite appears.

Click

If you wish to use **USB**, click here.

to install your residential modem/router on the **USB** interface.



5 The screen opposite appears and prompts you to wait while the drivers are installed.

6 The screen opposite appears.

Connect the USB lead by connecting the type B "square" end to the modem/router (**USB** socket) then by connecting the other type A "flat" end to a corresponding available socket on your computer according to the animation displayed on screen.

7 The screen opposite appears.

Select your country of residence and your **I**nternet **S**ervice **P**rovider (ISP).

Click the

button to continue installation.

8 The screen opposite appears.

Enter the login identifier then the login password and confirm the latter.

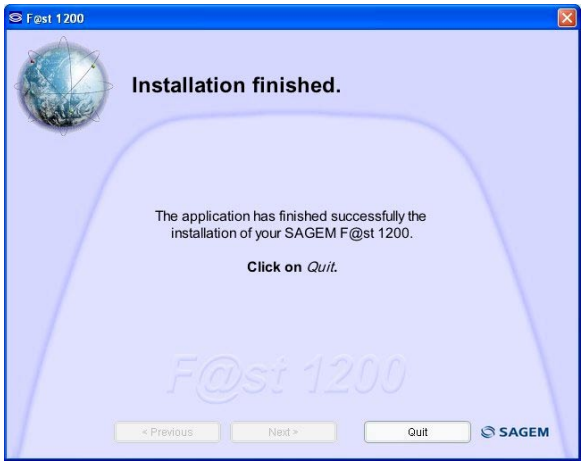
These are available from your subscription confirmation email.

Click the Next > button to continue installation.

9 Installation is finished.

Two icons have been created respectively on your desktop and in the task bar (see detail below).

Click Quit .



☞ This icon created on your desktop lets you configure your modem/router (see chapter 5, Configuration).

☞ This icon created in the task bar lets you know the status of the modem/router (see Appendix A - Troubleshooting).

You can also use the **Start** menu to select **All programs** / **SAGEM F@st 1200** to access the following options:

You can now:

- **Surf the Internet**
- **Configure your modem/router more specifically.**

Caution: If on installation you entered an **incorrect** login identifier or password, you will have been able to continue and finish installation and have been allowed access to the configurator.

However, under no circumstances will you be able to surf the Internet.

To surf the Internet, you must enter the correct information, supplied to you by your Internet Service Provider. For this:

Open your configurator (see chapter 5), then select the "**WAN Setup**" tab.

3.2.2 In Mac OSX

The USB interface is not supported by Mac OSX.

Ethernet interface Using is described in section 3.1.2.

3.3 Installing and configuring an additional computer

Object: This procedure is for installing an additional computer. This computer can be connected either to a HUB or to another interface on the modem.

To install an additional computer, you first need to "completely" install your modem and configure it correctly.

1 Insert the CD-ROM in your computer's appropriate drive; the screen opposite appears.

Carry out the operations described on screen.

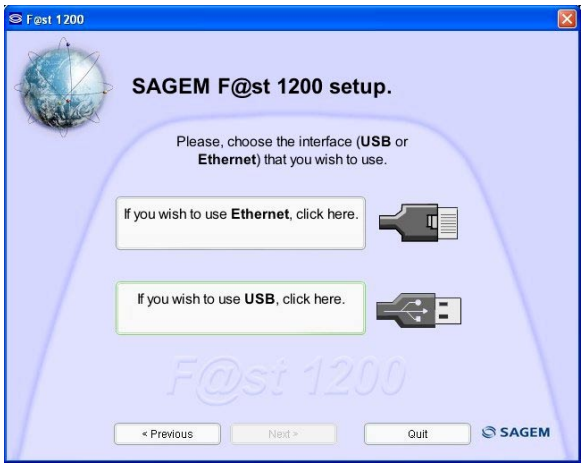
Click the Next > button to continue installation.

Note: If this screen does not appear: Select **Start**, then **Run**, then enter: "<CD-ROM drive letter> :**F@st1200.exe** then click **OK**.

2 The screen opposite appears.

Click Additional computer installation
*I want to **connect** my computer. My SAGEM F@st 1200 must be already correctly configured.*.

3 The screen opposite appears.



Click

If you wish to use **Ethernet**, click here.

to install your modem/router on the **ETH** interface
(see section 3.1 - steps 5, 6, 7 and 10).

Click

If you wish to use **USB**, click here.

to install your modem/router on the **USB** interface
(see section 3.2 - steps 5, 6 and 9).

The steps concerning:

- connecting the modem/router to the telephone socket and the mains outlet,
- and configuring your SAGEM F@st™ 1200/1240 (login identifier and login password, etc.),

must not be carried out when installing and configuring an additional computer whatever the interface (ETH or USB).

4. Information

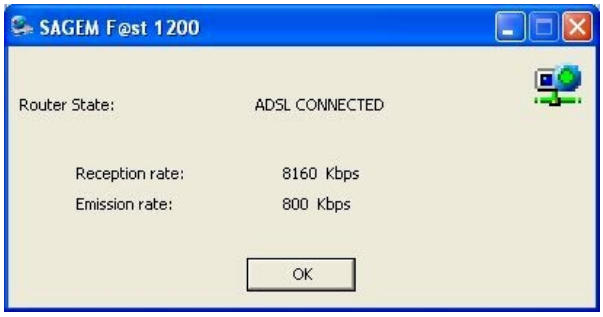
You can at any time ascertain the status of your modem/router and your ADSL line by displaying the connection icon in the task bar.

In Windows only.

This icon appears immediately installation is finished and indicates that the modem is operational and that the ADSL line is connected to the Internet.

In the event of a fault, two other icons can appear in the task bar. These are detailed in appendix A - Troubleshooting.

For more details, click this icon; the screen opposite appears.



Click the OK button to close the window.

If, inadvertently, you close the window by clicking the (Close) button, the icon disappears from the task bar.

To redisplay this icon, select **Start**, **All programs** / **SAGEM F@st 1200** then click the left mouse button on **Information**.

5. Configuration

This chapter	➢ Tells you how to access the configurator's home screen.	§ 5.1
	➢ Gives recommendations for the use of the configuration screens.	§ 5.2
	➢ Details the various modem/router setup functions.	§.5.3

5.1 Launching the configurator

5.1.1 In Windows

Before using the configuration tool, you need to have configured the Ethernet or USB interface on your computer using the installation CD-ROM supplied with your SAGEM F@st™ 1200/1240 (see chapter 3).

The SAGEM F@st™ 1200/1240's DHCP server function is activated by default with a range of addresses, as indicated in section 5.3.1.3.

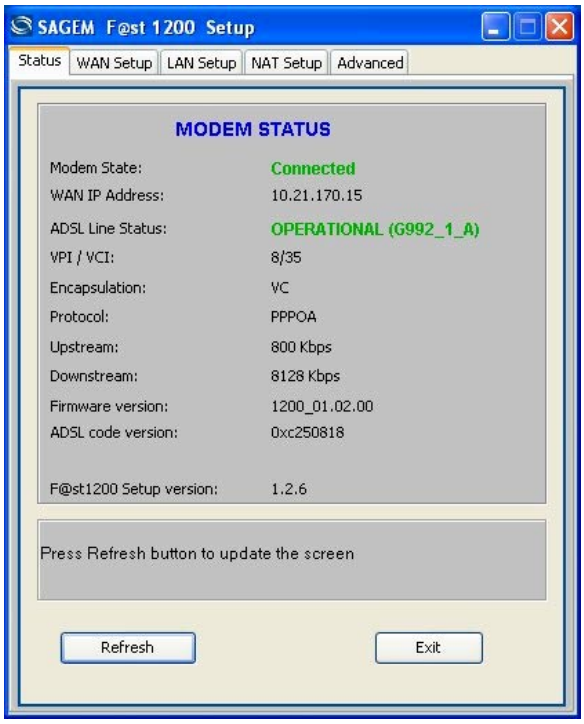
1 Double-click the configuration icon created on the desktop after installing the equipment:

or

In the **Start** menu, select **All programs** / **SAGEM F@st 1200**.

then left click on **Configure**.

2 The configuration screen opposite appears with the "**Status**" tab selected.



5.1.2 In Mac OS X

The **configuration** procedure described below was performed in **Mac OS 10.4.1** (Tiger). It can be performed in other operating systems such as **Mac OS X 10.2 and 10.3**.

1 Insert the CD-ROM provided with the modem/routeur in your computer's appropriate drive ; the following icon appears in the desktop:

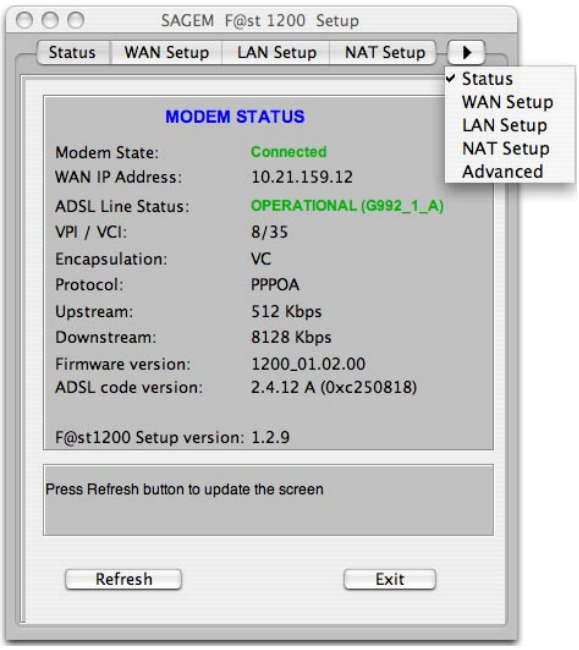
Click this icon ; the opposite home screen appears.

2 To make the "F@st 1200 Configuration" icon constantly present on the desktop, select in the Home screen with the mouse the following icon:

then move it to the desktop.

3 The following "Configuration" icon appears in the desktop.

Click this icon ; the configuration screen appears with the "**Status**" tab selected.



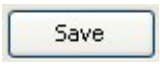
On the screen appear four among five configuration menus represented by tabs.

Click the or buttons to display the menus drop-down list.

To display menu, select it in the drop-down list or click the appropriated tab if this one is displayed at the screen.

5.2 Recommendations

The meanings of the main buttons commonly appearing in all the configuration windows are given in the table below.

	Click this button to update the parameters on screen.
	Click this button to save the current configuration parameters in your modem/router's permanent memory. A confirmation window appears if the operation is successful. Click the **OK** button to close the window. You are **recommended** to save all the parameters that you have altered.
	Click this button to exit from the application without saving your input.

5.3 Configuring your modem/router

5.3.1 In Windows

The configuration application has a number of headings for displaying the ADSL line parameters and configuring your modem/router.

These headings, accessed by clicking the appropriate tab, are:

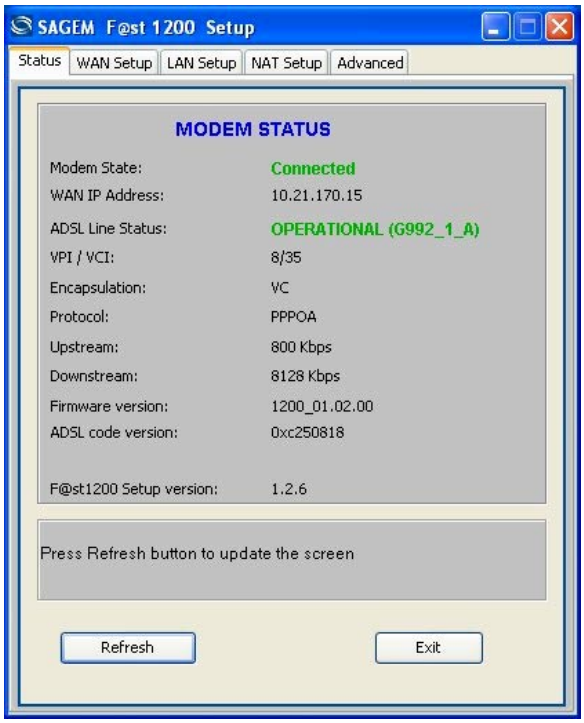
- Status (see 5.3.1.1),
- WAN Setup (see 5.3.1.2),
- LAN Setup (see 5.3.1.3),
- NAT Setup (see 5.3.1.4),
- Advanced (see 5.3.1.5).

5.3.1.1 Status

Object: This function is for viewing the ADSL line statistics.

Select the **Status** tab.

The screen opposite appears.



Field	Meaning
Modem State	Three possible cases: Connected (Writing in green): Normal operation. Negociating IP (Writing in yellow): The modem is connecting to the Internet. NOT Connected (Writing in red): The ADSL line is disconnected.
WAN IP Address	Displays the Public IP address (WAN) assigned to the modem/router. This field may be empty when the modem/router is in negotiation mode or the ADSL line is not connected.
ADSL Line Status	Two possible cases: OPERATIONAL (G992_1_A) : indicates that the ADSL link is set up and also the supported ADSL standard. IDLE : indicates that the ADSL link is not set up (line disconnected, for example).
VPI / VCI	Displays the VPI supplied by your **I**nternet **S**ervice **P**rovider (ISP). Displays the VCI supplied by your **I**nternet **S**ervice **P**rovider (ISP).
Encapsulation	Displays the encapsulation supplied by your **I**nternet **S**ervice **P**rovider (ISP). Two possible cases: VC : **V**irtual **C**hannel (Encapsulation without header). LCC : **L**ogical **L**ink **C**ontrol (Encapsulation with header).

Field	Meaning
Protocol	Displays the protocol supplied by your **I**nternet **S**ervice **P**rovider (ISP). Five possible cases: RFC1483 Bridged : Bridged. RFC1483 Routed : Routed. PPPoE : PPP over Ethernet. PPPoA : PPP over ATM. MER : **M**AC **E**ncapsulated **R**outed.
Upstream	Displays the upstream rate of the ADSL line (expressed in kbit/s).
Downstream	Displays the downstream rate of the ADSL line (expressed in kbit/s).
Firmware version	Displays the modem/router firmware version.
ADSL code version	Displays the ADSL code.
F@st1200 Setup version	Displays the configuration application version.

No field on the screen can be modified.

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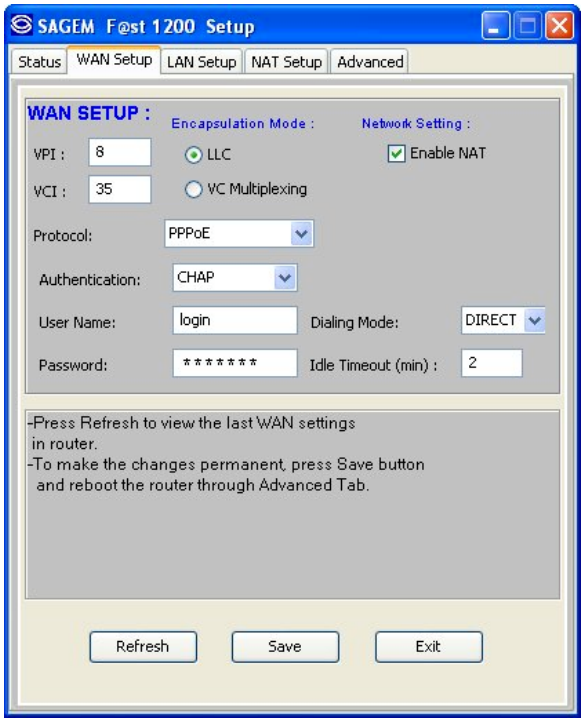
5.3.1.2 WAN Setup

Object: This function is for setting up the wide area network (WAN) access interface.

Select the **WAN Setup** tab.

The screen opposite appears.



The following fields are common to all the protocols.

Field	Meaning
VPI	Enter a VPI value between 0 and 255.
VCI	Enter a VCI value between 6 and 65535 (apart from 16).
Encapsulation Mode	Select one of the two proposed encapsulation modes (LLC or VC Multiplexing).

Depending on the protocol chosen, the number of fields to be completed differs. You must therefore select a protocol mode before completing the various fields.

RFC1483 Bridged

Common fields only.

RFC1483 Routed

Field	Meaning
Network Setting	**Enable NAT** : Check the appropriate box to enable address translation (NAT) (**Recommended**).
	Enable DHCP : Check the appropriate box to activate the modem/router's "DHCP client" function.
WAN IP Address	This field is active only when the "DHCP client" function is deactivated (Enable DHCP field check box not checked). Enter a WAN IP address.
WAN Subnet Mask	This field is active only when the "DHCP client" function is deactivated (Enable DHCP field check box not checked). Enter a WAN subnet mask.

PPPoE

Field	Meaning
Network Setting	**Enable NAT** : Check the appropriate box to enable address translation (NAT) (**Recommended**).
Authentication	Select one of the proposed authentication modes (CHAP or PAP).
User Name	Enter the user name (32 characters maximum) supplied by your **I**nternet **S**ervice **P**rovider (ISP).
Password	Enter the password (32 characters maximum) supplied by your **I**nternet **S**ervice **P**rovider (ISP).
Dialling	Select: **AUTO** : The PPPoE link will be set up only if there is traffic on the ADSL line. **DIRECT** : The PPPoE link will always be set up even if there is no traffic on the ADSL line. Select **DIRECT** (**Recommended**).
Idle timeout (min)	Enter a delay (expressed in minutes) after which the PPPoE link will disconnect in the absence of Internet traffic.

PPPoA

Field	Meaning
Network Setting	**Enable NAT** : Check the appropriate box to enable address translation (NAT) (**Recommended**).
Authentication	Select one of the proposed authentication modes (CHAP or PAP).
User Name	Enter the user name (32 characters maximum) supplied by your **I**nternet **S**ervice **P**rovider (ISP).
Password	Enter the password (32 characters maximum) supplied by your **I**nternet **S**ervice **P**rovider (ISP).

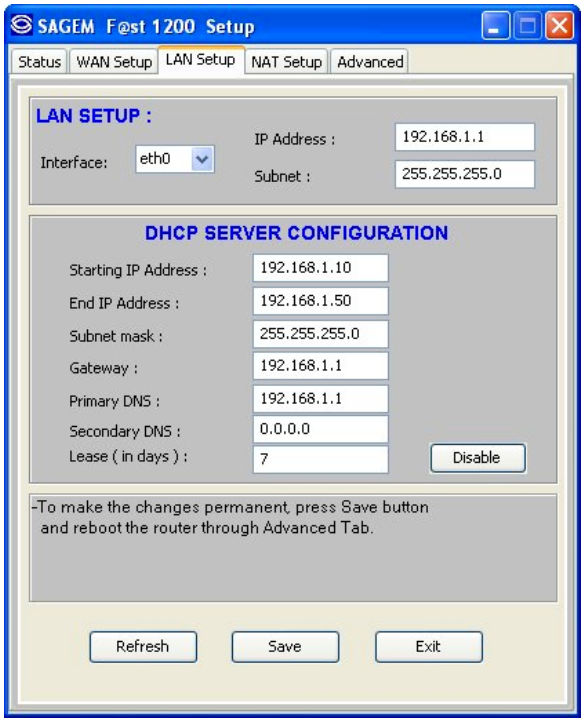
MER

Field	Meaning
Network Setting	**Enable NAT** : Check the appropriate box to enable address translation (NAT) (**Recommended**).
	Enable DHCP : Check the appropriate box to enable the modem/router's "DHCP client" function.
IP Address	This field is active only when the "DHCP client" is deactivated (**Enable DHCP** field check box not checked). Enter a network IP address.
Subnet Mask	This field is active only when the "DHCP client" function is deactivated (**Enable DHCP** field check box not checked). Enter a subnetwork mask.

5.3.1.3 LAN Setup

Select the **LAN Setup** tab.

The screen opposite appears.



LAN SETUP

Object: This function is for entering the local IP address and the dedicated subnetwork mask.

Field	Meaning	Default
Interface	Interface connected to the local area network LAN: eth0.	**Eth0**
IP Address	IP address.	**192.168.1.1**
Subnet	IP subnetwork mask.	**255.255.255.0**

If you want to **change the address and local subnetwork** of your modem/router, **you must configure** your modem/router's **DHCP server** in the same network.
(see **Change of address** section).

DHCP SERVER CONFIGURATION

Object: This function is for "**Enabling**" or "**Disabling**" the modem/router's DHCP server function with its own parameters. The DHCP server automatically assigns an IP configuration to any computer connected to the modem/router.

This area displays all the default settings of the modem/router's DHCP server.

The **DHCP server** is always "**Enabled" by default** (

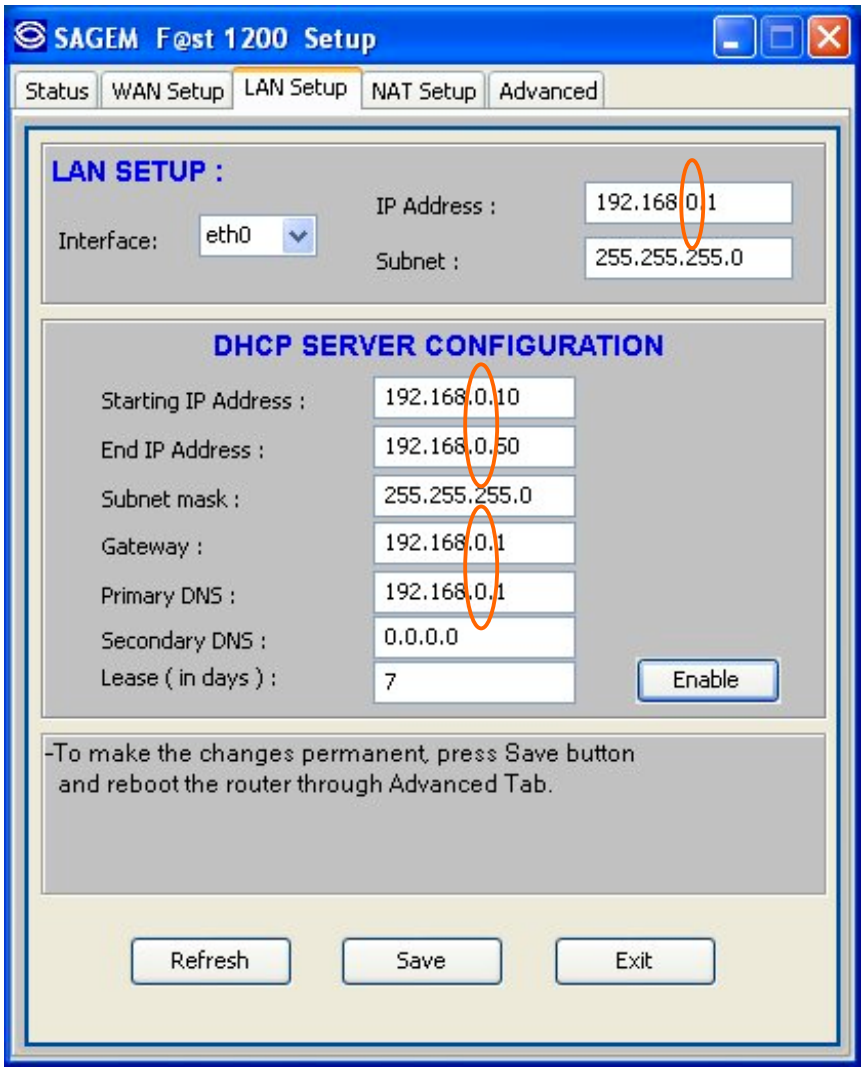
button showing).

If you want to **change the DHCP server settings, you must save the configuration** (**SAVE** button) then **reset the modem** and all the equipment connected to it.

Field	Meaning	Default
Starting IP Address	The first address assigned by the DHCP server. **Note:** This IP address should belong to the same subnetwork as that of the modem/router IP address.	**192.168.1.10**
End IP Address	The last address assigned by the DHCP server. **Note:** This IP address should belong to the same subnetwork as that of modem/router IP address.	**192.168.1.50**
Subnet	IP subnetwork mask.	**255.255.255.0**
Gateway	Gateway address (LAN address of the modem/router).	**192.168.1.1**
Primary DNS	Address of your **I**nternet **S**erver **P**rovider's primary DNS server. **Note:** Set by default to the LAN address of the modem/router to be used as a DNS relay (**recommended**).	**192.168.1.1**
Secondary DNS	Address of your **I**nternet **S**erver **P**rovider's secondary DNS server.	**0.0.0.0**
Lease (in days)	Availability period (in days) of each IP address assigned.	**7**

Change of address

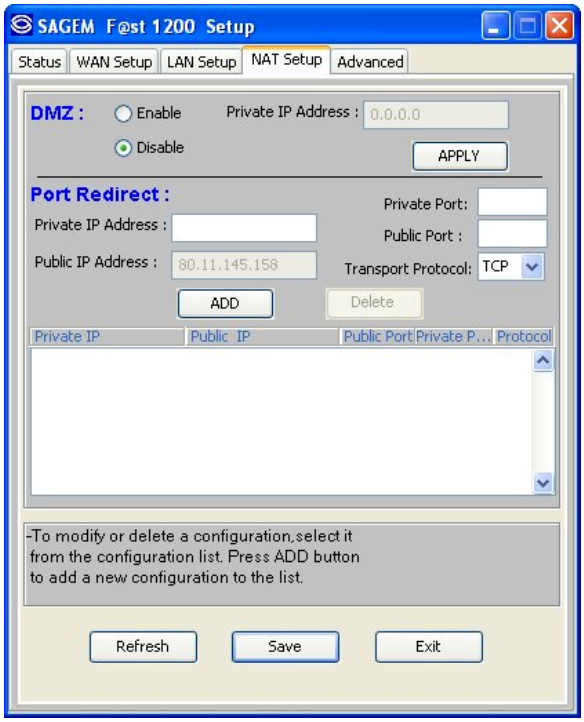
An example of change of address and subnetwork of the LAN involving a change of network on the modem/router's DHCP server is given below.



5.3.1.4 NAT Setup

Select the **NAT Setup** tab.

The screen opposite appears.



DMZ (Demilitarized Zone)

Object: This function is for directing all incoming traffic (WAN) to a predefined local area network (LAN) address, regardless of port.

This activate this functionality, select **Enable**.

Field	Meaning	Default
Private IP Address	This field is active only if the "DMZ" functionality is activated. If you want to use this functionality, enter a local (LAN) IP address.	**0.0.0.0**

Click the APPLY button to register the address entered then the Save button if you want to save this configuration.

Port Redirect

Object: This area is for redirecting a public port (**Public Port**) to a private port (**Private Port**) and a computer by its associated address (**Private IP Address**). This lets you configure your modem/router so that remote users using services such as FTP (port 21) or HTTP (80) via public addresses can access local servers with private addresses via private ports.

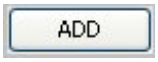
"ADD" button

This button is for adding a new configuration.

Enter a private IP address in the "**Private IP Address**" field.

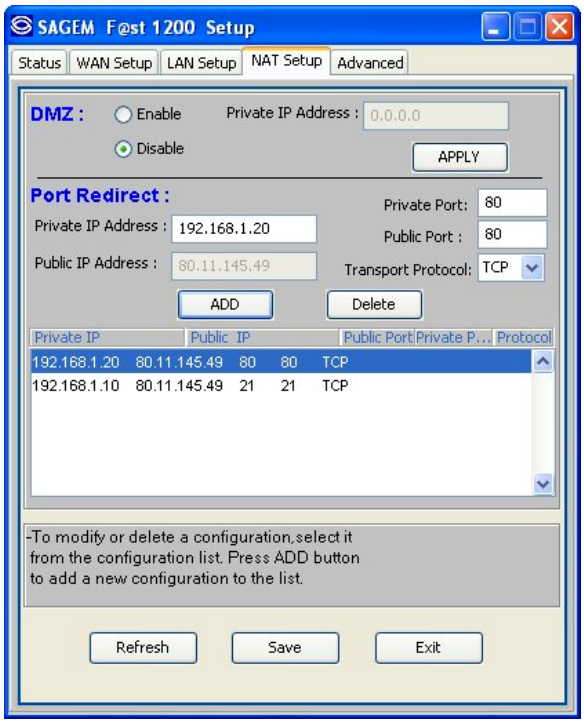
Enter a private port in the "**Private Port**" field.

Enter a public port in the "**Public Port**" field.

Click the 

button to add a new configuration.

The screen opposite shows two configurations added.



"Delete" button

To delete a configuration from the list, select the one you want to delete then click the

button.

5.3.1.5 Advanced

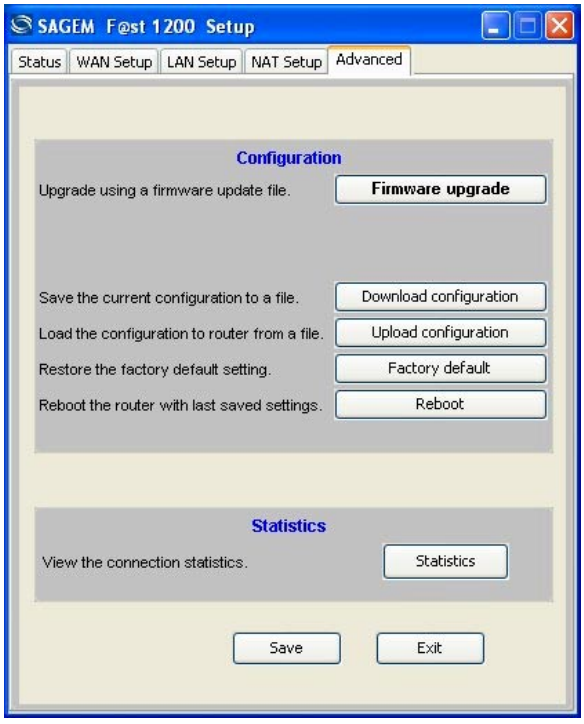
This heading is reserved for advanced users.

Object: This heading lets you:

- update the firmware,
- save (download), in a file, the configuration in the modem/router,
- upload a configuration to the modem/router,
- restore the default factory settings,
- restart the modem/router in the last saved configuration.

Select the **Advanced** tab.

The screen opposite appears.



5.3.2 In Mac OSX

The screens appearance and the configurator menus contents in Mac and Windows being similar, refer to section 5.3.1.

A. Appendix A - Troubleshooting

This chapter covers	➢ checking the assignment of an IP address	§ A.1
	➢ interpreting LEDs	§ A.2
	➢ operation alarms	§ A.3
	➢ the IP address	§ A.4
	➢ restoring the factory-set configuration	§ 0

A.1 Checking the assignment of an IP address

A range of IP addresses is assigned for each interface (see section D.1).

A.1.1 In Windows

In Windows 98

- Click **Start**, select **Run**, enter **winipcfg** then click **OK**; the dedicated application appears.
- Check that the IP address entry contains a value other than **0.0.0.0** (**192.168.1.10** for example) for the local area network (LAN) interface connected to the modem.

In Windows XP, 2000 and Me

- Click **Start**, select **Run**, enter **cmd** then click **OK**; the command prompt window appears. Enter **ipconfig** then confirm by pressing **Enter**.
- Check that the IP Address entry contains a value other than **0.0.0.0** (**192.168.1.10** for example) for the local area network (LAN) interface connected to the modem.

A.1.2 In Mac (MacOS X for example)

- Click the **Apple** in the menu bar.
- Select **System Preferences**, then click the **Network** icon.
- Check that the IP Address entry contains a value other than **0.0.0.0** (**192.168.1.10** for example) for the local area network (LAN) interface connected to the modem.

All the troubleshooting procedures described below were carried out in **Windows® XP**. The procedures in other Windows® operating systems (98, ME and 2000) may present slight differences.

A.2 Interpreting LEDs

The four LEDs on the SAGEM F@st™ 1200/1240 reflect the status of the various interfaces.

When the SAGEM F@st™ 1200/1240 is powered up, the **PWR** LED lights first followed by the other three LEDs, then these last three go off in turn.

A.3 Operation alarms

These alarms reflect events occurring while the SAGEM F@st™ 1200/1240 is operating. They can be diagnosed using the green LEDs on the front panel of the unit or via the icon in the task bar.

Front panel green LEDs

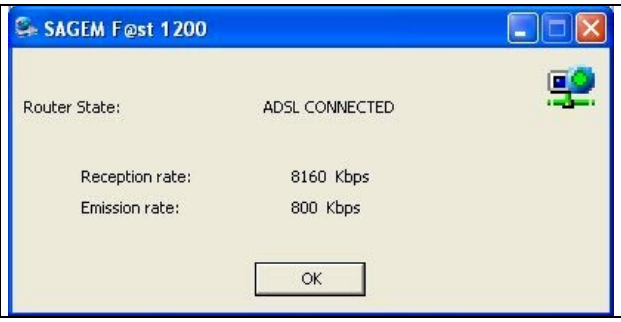
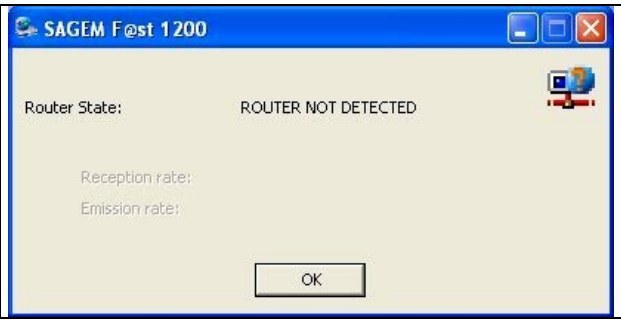
The table below gives the meaning of the various LEDs.

Marking	PWR	USB	ETH	LINE
On steady	Power supply presence	Activation/Activity on USB link	Activity on ETH link	ADSL line synchronized
Blinking slowly	–	–	In pace with traffic	ADSL synchronizing (see section A.3.1)
Off	No power supply	No activity on USB link	On activity on ETH link	Line not connected

Icon in the task bar

In Windows only.

This icon with its associated screen gives the various modem/router states:

		The modem/router is operational and the ADSL line is connected to the Internet.
		1) The ADSL line is not connected to the modem/router. Check the connection to the modem/router. or 2) The PPP link is not set up. Check the PPP link parameters supplied by your **I**nternet **S**ervice **P**rovider (ISP).
		No communication with the modem/router. 1) Check that the modem/router is powered up. 2) Check that the modem/router is correctly connected to your computer via its Ethernet (ETH) interface or its USB (USB) interface.

A.3.1 "LINE" LED blinking

- Check the connection of your ADSL splitters. Each telephone socket used in your installation should be fitted with an ADSL splitter.
- Check that the RJ11 line lead supplied with your SAGEM F@st™ 1200/1240 is connected to one of your outlets. The use of telephone extension leads is not recommended.
- Finally, check with your ISP on the availability of the ADSL service on your telephone line.

A.3.2 All LEDs off

- Check that the type of power supply available in your premises is in accordance with the mains voltage needed to power your SAGEM F@st™ 1200/1240.
- Check that the power supply lead supplied is correctly connected at one end to the mains power supply network.
- Check that the power supply connector is correctly inserted into the corresponding port (Power) on the SAGEM F@st™ 1200/1240.

A.3.3 All LEDs blinking simultaneously

The modem/router has restarted in a "Recovery" degraded mode.

You **must** contact your **I**nternet **S**ervice **P**rovider (ISP).

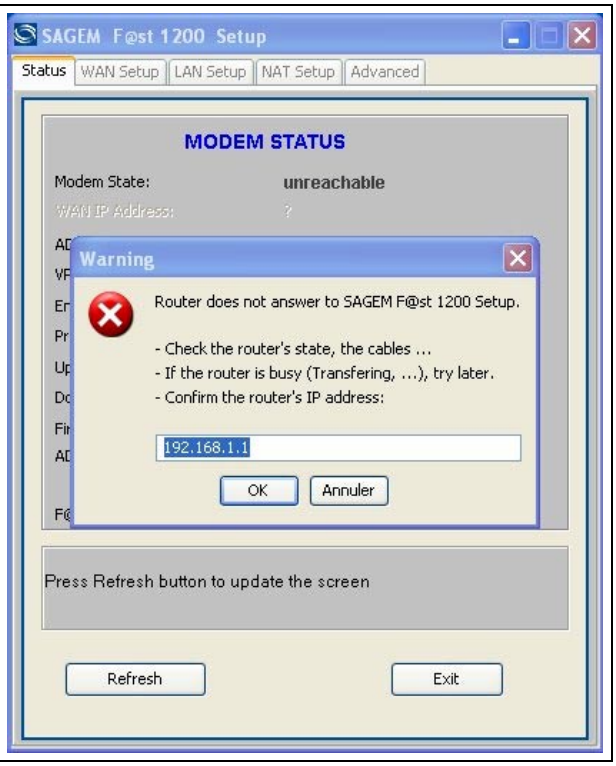
A.4 Loss of modem/router IP address

If your modem/router's IP address is lost, communication by the configuration application with the equipment becomes impossible.

When the configuration utility fails to set up communication with the modem/router, the window opposite appears.

You must enter the modem/router's IP address then click **OK** to try to set up the dialogue.

For the dialogue to be set up, the IP addresses of your computer and your modem/router need to be in the same subnetwork plan.



If after a number of unsuccessful attempts the **Status** tab still indicates that the router is unreachable, it will be necessary to restore your modem/router to its default IP configuration by reverting to the factory configuration (see section A.5).

A.5 Restoring the factory-set configuration

To **restart** your modem/router **in factory-set configuration**:

Press the **RST** button using a pointed object until the four LEDs come on steady.

Then release this button; your SAGEM F@st™ 1200/1240 restarts in factory-set configuration (**Local area network: 192.168.1.0/24 and modem/router address: 192.168.1.1**).

This operation cancels all your modem/router's customized configuration.

B. Appendix B - Safety warnings

This chapter covers	➢ safety warnings	§ B.1
	➢ the CE declaration of conformity	§ B.2

B.1 Safety warnings

The SAGEM F@st™ 1200/1240 product is compliant with EN 60950, December 2001 edition. The safety levels according to this standard are as follows:

B.1.1 Safety levels on the SAGEM F@st™ 1200/1240 unit

Port	*Function*	*Safety level*
PWR	Primary power supply port	HPV[1]
USB	USB interface port	SELV[2]
ETH	Ethernet port	SELV[2]
LINE	ADSL port	TNV3[3]

[1] **H**azardous **P**rimary **V**oltage circuit
[2] **S**afety **E**xtra **L**ow **V**oltage circuit
[3] **T**elecommunication **N**etwork **V**oltage level **3** circuit

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B.2 CE declaration of conformity

CE

Products bearing this symbol are compliant with the EMC regulations and the Low Voltage Directive published by the European Commission (EC).

Sagem Communication declares that the SAGEM F@st™ 1200/1240 product is compliant with the requirements of European directives 1995/5/CE and the main requirements of the directives 89/336/EEC dated 03/05/1989 and 73/23/EEC dated 19/02/1973, and that it effectively uses the spectrum assigned to terrestrial or space radiocommunications.

The CE declaration of conformity for the SAGEM F@st™ 1200/1240 is provided within the framework of the R&TTE directive.

This compliance is presumed by the full compliance with the harmonized European standards:

Safety

EN 60950-1	Ed: 12.2001

EMC

EN 55 022 Class B	Ed 09-1998
EN 55 024	Ed 09-1998

Sagem Communication disclaims all liability if the current regulations are not correctly observed at the place of installation.

The CE declaration of conformity for the SAGEM F@st™ 1200/1240 is included in the form of a pdf file on the product delivery CD-ROM.

Appendix B - Safety warnings

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C. Appendix C - Technical specifications

This chapter covers	➢ the mechanical specifications and displays	§ C.1
	➢ the specifications of the various interfaces	§ C.2
	➢ the environmental specifications	§ C.3
	➢ the software and protocols	§ C.4

C.1 Mechanical specifications - Displays

Mechanical specifications		
Dimensions	• Length	: 140 mm
	• Width	: 95 mm
	• Depth	: < 32 mm
Unit weight	•	: 200 g
Weight of mains adapter	•	: 480 g
Installation	•	: Desktop
	•	: Wall-mounted
Protection rating	•	: IP30

Displays		
Four LEDs	**PWR**	Power supply presence
	USB	USB activity
	ETH	ETH activity
	LINE	ADSL interface

C.2 Interface specifications

Ethernet LAN interface	
Bit rate	• 10 Mbit/s or 100 Mbit/s, self-configurable
	• Half / Full Duplex
Standard	• IEEE 802.3
Connectors	• RJ45 • Self-detecting MDI or MDI-x type port • Straight or cross-pinned lead

ADSL / ADSL2 / ADSL2+ interface	
Transmission code	• DMT
Standards supported	• G.992.1 (ADSL), G.992.3 (ADSL2), G.992.3 Annexe L (Reach Extended), G.992.5 (ADSL2+)
	• G.994.1 (G.Handshake)
Maximum upstream rate	• 2 Mbit/s
Maximum downstream rate	• 25 Mbit/s
Transmit power	• 12.5 dBm
Port impedance	• 100 Ohms
Range	• 0 to 5500 m (according to ADSL mode)
Latency	• Simple (Fast or Interlaced)

USB interface	
Bit rate	• 1.5 Mbit/s to 12 Mbit/s
Standard	• USB 1.1
Data	• Asynchronous
Transmission mode	• bidirectional
Consumption	• none (only voltage detection on a computer's high impedance port)
Connector	• USB - Type B

Mains power supply characteristics	
Type	• Mains lead
Class	• II
Mains voltage	• 230 V
Power consumed	• < 8 W
Mains connector	• Type C Europlug

C.3 Environmental specifications

Climatic and mechanical environment	
Warehousing	• ETS 300 019-1-1 Class T1.2
Transport	• ETS 300 019-1-2 Class T2.3
Operation	• ETS 300 019-1-3 Class T3.2 Temperature: -5°C / +45°C

Electrical robustness	
Standard	• ITU-T K.21 Ed 2000: basic level

Electromagnetic compatibility	
Transmission	• EN 55 022 Class B - Ed 01-1999
Harmonic currents	• EN 61 000-3-2
	• EN 61 000-3-3
	• EN 55 024

C.4 Software and protocols

IP characteristics	
TCP-IP, UDP, ICMP, ARP	
DHCP	• Server, relay
DNS	• Relay
Routing (LAN and WAN)	• Static
NAT / PAT	• 8 maps maximum

Encapsulation protocols	
PPP over ATM	• RFC 2364
PPP over Ethernet (PPPoE) over ATM	• RFC 2516, RFC 1483/2684
IP over ATM	• RFC 1483/2684
ETH over ATM	• RFC 1483/2684

Configuration	
HCP	• LAN port
Version download	• 1 version
Management	• From ETH, USB

D. Appendix D - Default configuration

This chapter covers	➢ the default configuration on the local area network (LAN) side	§ D.1

This chapter gives the default parameter settings for the SAGEM F@st™ 1200/1240 on leaving the factory.

D.1 Default configuration on the local area network (LAN) side

The table below gives the values of the main default LAN parameters for your residential gateway (**ETH**, **USB**):

LAN characteristics	Value	Status
ETH IP address	192.168.1.1/24	Internet and configurator access.
USB IP address		
BROADCAST, ARP, MULTICAST		Activated
Router		LAN traffic is routed to your ISP
NAT/PAT		Activated

E. Appendix E - Glossary

Glossary

ACL	**A**ccess **C**onfiguration **L**ist
ACL	**A**synchronous **C**onnection**L**ess
ADSL	**A**symmetric **D**igital **S**ubscriber **L**ine
ARP	**A**ddress **R**esolution **P**rotocol
CC	**C**ontinuity **C**heck
CCK	**C**omplementary **C**ode **K**eying
CDVT	**C**ell **D**elay **V**ariation **T**olerance
CHAP	**C**hallenge **H**andshake **A**uthentication **P**rotocol
CLI	**C**ommand **L**ine **I**nterface
CTP	**C**ordless **T**elephone **P**rofile
DHCP	**D**ynamic **H**ost **C**onfiguration **P**rotocol
DNS	**D**omain **N**ame **S**erver
DTIM	**D**elivery **T**raffic **I**ndication **M**essage
FTP	**F**ile **T**ransfer **P**rotocol
GAP	**G**eneric **A**ccess **P**rofile
HTML	**H**yper **T**ext **M**arkup **L**anguage
HTTP	**H**yper **T**ext **T**ransfer **P**rotocol
IEEE	**I**nstitute of **E**lectrical and **E**lectronics **E**ngineers
IEEE 802.11b/g	Specifications that use the MAC protocol for the wireless local area network (WLAN) in the 2.4 GHz band
IP	**I**nternet **P**rotocol
IPQoS	**IP Q**uality **O**f **S**ervice
ISP	**I**nternet **S**ervice **P**rovider
LAN	**L**ocal **A**rea **N**etwork
LCP	**L**ink **C**ontrol **P**rotocol
LLC	**L**ogical **L**ink **C**ontrol (encapsulation with header)
MAC	**M**edium **A**ccess **C**ontrol
MDI	**M**edia **D**ependent **I**nterface
MER	**M**AC **E**ncapsulation **R**outing
MTU	**M**aximum **T**ransfer **U**nit
NAPT	**N**etwork **A**ddress **P**ort **T**ranslation
NAT	**N**etwork **A**ddress **T**ranslation
OAM	**O**peration, **A**dministration and **M**aintenance
OBEX	**OB**ject, **EX**change
PAN	**P**ersonal **A**rea (**A**d-Hoc) **N**etwork
PAP	**P**assword **A**uthentication **P**rotocol
PCI	**P**eripheral **C**omponent **I**nterconnect
PCMCIA	**P**ersonal **C**omputer **M**emory **C**ard **I**nternational **A**ssociation

PDU	**P**rotocol **D**ata **U**nit
PING	**P**acket **I**nter**N**et **G**roper
PLC	**P**acket **L**oss **C**oncealment
PPP	**P**oint to **P**oint **P**rotocol
PPPoE	**PPP o**ver **E**thernet
PVC	**P**ermanent **V**irtual **C**ircuit
QoS	**Q**uality **o**f **S**ervice
RFC	**R**equest **F**or **C**omments
RTCP	**R**eal **T**ime **C**ontrol **P**rotocol
RTP	**R**eal-time **T**ransport **P**rotocol
SCO	**S**ynchronous **C**onnection-**O**riented
SCR	**S**ustained **C**ell **R**ate
SNAP	**S**ub**N**etwork **A**ttachment **P**oint
SPP	**S**erial **P**ort **P**rofile
SSID	**S**ervice **S**et **ID**entifier
STB	**S**et **T**op **B**ox
TCP	**T**ransmission **C**ontrol **P**rotocol
TELNET	**TEL**ecommunication **NET**work
TFTP	**T**rivial **F**ile **T**ransfer **P**rotocol
UBR	**U**nspecified **B**it **R**ate
UDP	**U**ser **D**atagram **P**rotocol
URL	**U**niformed **R**esource **L**ocator
USB	**U**niversal **S**erial **B**us
UTP	**U**nshielded **T**wisted **P**air
VAD	**V**oice **A**ctivity **D**etection
VBR-nrt	**V**ariable **B**it **R**ate - **n**on **r**eal **t**ime
VBR-rt	**V**ariable **B**it **R**ate - **r**eal **t**ime
VC	**V**irtual **C**hannel
VCC	**V**irtual **C**hannel **C**onnection
VCI	**V**irtual **C**hannel **I**dentifier
VC MUX	**V**C **MU**ltiple**X**ing (encapsulation without header)
VLAN	**V**irtual **LAN**
VoIP	**V**oice **o**ver **IP**
VP	**V**irtual **P**ath
VPI	**V**irtual **P**ath **I**dentifier
VPN	**V**irtual **P**rivate **N**etwork
WAN	**W**ide **Ar**ea **N**etwork
WEB	Meshed network of information servers
WFQ	**W**eighted **F**air **Q**ueuing

Appendix E - Glossary

F. Appendix F - Connectors

This chapter covers	➢ the pinout of the "**PWR**" connector	§ F.1
	➢ the pinout of the "**USB**" connector	§ F.2
	➢ the pinout of the "**ETH**" connector	§ F.3
	➢ the pinout of the "**LINE**" connector	§ F.4

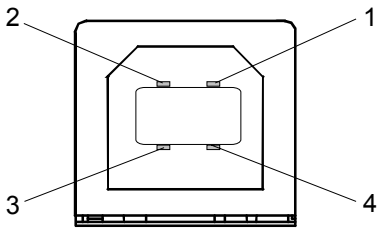
F.1 "PWR" connector pinout

The mains adapter is connected to the equipment via the miniature socket on the unit.

Pin	Signal	Meaning
Inner	+7.5 V	DC "+" connection
Outer	Ground	DC "-" connection

F.2 "USB" connector pinout

The "USB" interface is connected to the equipment via a type B USB socket.



Contact N°	Signal	Meaning
1	Vcc	PC power supply (+)
2	-Data	Subscriber line signal
3	+Data	Subscriber line signal
4	Ground	Ground

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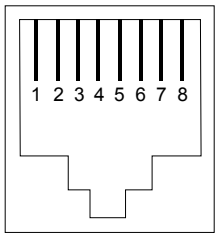
F.3 "ETH" connector pinout

The ETH interface is connected to the equipment via an RJ45 socket (eight contacts).

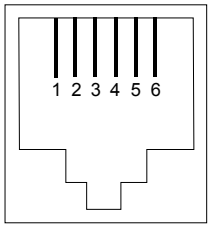


Contact N°	Signal	Meaning
1	TXD+	(+) Transmit to terminal
2	TXD-	(-) Transmit to terminal
3	RXD+	(+) Receive from terminal
4	NC	Not Connected
5	NC	Not Connected
6	RXD-	(-) Receive from terminal
7	NC	Not Connected
8	NC	Not Connected

The Ethernet connector system is self-detecting. You can use straight or cross-pinned cables interchangeably. A transmit or receive signal is detected automatically.

F.4 "LINE" connector pinout

The equipment is connected to the ADSL line via an RJ11 socket (six contacts).



Contact N°	Signal	Meaning
3	LINE-A	Line A signal
4	LINE-B	Line B signal
1	NC	Not Connected
2	NC	Not Connected
5	NC	Not Connected
6	NC	Not Connected

Appendix F - Connectors

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